Task. How many different strings can be made from the letters in ORONO, using some or all of the letters?

Solution. Let A_i, $i = 1, 2, 3, 4, 5$, be the number of all i-letters words made from some letters in ORONO. We should find

$$A = A_1 + A_2 + A_3 + A_4 + A_5.$$

Let us write down all possible words.

The list of 1-letters words:

$$O, N, R$$

so

$$A_1 = 3.$$

The list of 2-letters words:

$$OO, \quad OR,\ ON,\ RO,\ NO, \quad RN,\ NR,$$

so

$$A_2 = 7.$$

The list of 3-letters words:

$$OOO,$$
$$OOR,\ OON,\ ORO,\ ONO,\ ROO,\ NOO,$$
$$ORN,\ ONR,\ RON,\ NOR,\ RNO,\ NRO$$

so

$$A_3 = 13.$$

The list of 4-letters words:

$$OOOR,\ \ OOON,\ \ OORO,\ \ OONO,\ OROO,\ ONOO,\ ROOO,\ NOOO,$$
$$OORN,\ OONR,\ ORON,\ ONOR,\ ROON,\ NOOR,\ RONO,\ NORO,\ RNOO,\ NROO,$$

so

$$A_4 = 18.$$

The list of 5-letters words in which N stands before R:

$$OONR,\ OONOR,\ ONOOR,\ NOOOR,$$
$$OONRO,\ ONORO,\ NOORO,$$
$$ONROO,\ NOROO,$$
$$NROOO,$$

The list of 5-letters words in which R stands before N:

$$OOORN,\ OORON,\ OROON,\ ROOON,$$
$$OORNO,\ ORONO,\ ROONO,$$
$$ORNOO,\ RONOO,$$
$$RNOOO$$

and thus

$$A_5 = 20.$$

Hence

$$A = 3 + 7 + 13 + 18 + 20 = 61.$$

Answer. 61.